

FAST TURN-OFF SLOW TURN-ON ARBITRATOR FOR  
REDUCING TRI-STATE DRIVER POWER  
DISSIPATION ON A SHARED BUS

ABSTRACT OF THE DISCLOSURE

5 A bus arbitrator for use in a shared bus system in which N bus  
devices request access to a shared bus. The bus arbitrator slowly  
activates and rapidly de-activates tristate line drivers coupled to  
the shared bus. The bus arbitrator comprises: 1) an input  
10 interface for receiving a first bus access request signal from a  
first bus device; 2) a delay circuit that receives the first bus  
access request signal from the input interface and generates a  
time-delayed first bus access request signal; and 3) a comparator  
15 circuit that receives the first bus access request signal from the  
input interface and the time-delayed first bus access request  
signal from the delay circuit and generates a line driver enable  
signal only if both of the first bus access request signal and the  
time-delayed first bus access request signal are enabled. The  
20 comparator circuit disables the line driver enable signal if either  
of the first bus access request signal or the time-delayed first  
bus access request signal is disabled.